

freezing temperatures were recorded three times at the substation, the last on April 22 when a minimum of 31° occurred.

The conclusions from the 2 years of comparative record are: (1) Usually the afternoon temperature is higher and the night temperature is lower near the ground than on the roof. (2) The penthouse in its present location relative to the thermometer shelter at the Weather Bureau office may have some influence on the maximum temperature. (3) Wind direction and state of weather influence the difference in both the maxima and the minima between the two exposures. (4) Wind velocities do not affect the difference between the maxima, but do have a considerable influence on the difference between the minima at the two exposures; at lower wind velocities, lower temperatures occur near the ground. (5) The wetness of the ground keeps the maximum temperature near the ground lower than that on the roof. (6) Freezing temperatures are likely to be recorded earlier in the fall and later in the spring at the substation than at the Weather Bureau office.

TABLE 1
MEAN TEMPERATURES, 1935

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Station 1.....	33.2	36.7	51.0	52.4	59.4	71.2	87.0	80.0	69.1	56.2	40.8	32.2	55.7
Station 2.....	33.3	38.4	52.2	52.6	61.0	71.6	85.8	80.2	68.6	56.6	40.8	32.0	56.1

MEAN TEMPERATURES, 1936

Station 1.....	21.2	19.4	49.0	54.4	69.8	78.4	88.4	87.4	73.2	56.0	43.1	37.8	56.5
Station 2.....	21.8	20.8	49.3	54.8	69.0	77.5	87.0	86.7	73.6	56.4	42.9	38.0	56.5

MEAN MAXIMUM TEMPERATURES, 1935

Station 1.....	41.6	44.9	61.8	62.8	67.6	81.8	99.7	91.6	80.7	66.4	48.4	40.1	65.6
Station 2.....	44.0	48.6	65.0	63.9	70.4	83.2	100.2	93.5	82.0	68.6	49.5	41.4	67.5

MEAN MAXIMUM TEMPERATURES, 1936

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Station 1.....	29.6	29.1	62.8	67.5	80.7	92.3	102.5	101.2	83.7	66.2	56.0	46.9	68.2
Station 2.....	30.7	32.3	65.4	70.8	81.6	93.5	104.3	103.4	85.2	68.9	58.2	48.7	70.2

MEAN MINIMUM TEMPERATURES, 1935

Station 1.....	22.7	28.5	40.3	42.0	51.1	60.7	74.4	68.5	57.5	46.0	33.3	24.4	45.8
Station 2.....	22.6	28.3	39.3	41.3	51.5	59.9	71.5	66.9	55.1	44.7	32.5	22.6	44.7

MEAN MINIMUM TEMPERATURES, 1936

Station 1.....	12.9	9.7	35.1	41.2	58.9	64.4	74.2	73.7	62.7	45.9	30.2	28.8	44.8
Station 2.....	12.9	9.2	33.2	38.9	56.5	61.5	69.8	70.0	62.1	43.8	27.6	27.4	42.7

TABLE 2

EXTREME MAXIMUM TEMPERATURES, 1935

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Station 1.....	66	74	87	85	90	94	106	108	93	85	68	57
Station 2.....	66	77	88	87	89	94	108	108	93	87	69	58

EXTREME MAXIMUM TEMPERATURES, 1936

Station 1.....	56	76	81	91	92	109	114	113	105	85	78	66
Station 2.....	55	74	83	93	91	107	115	116	107	86	80	67

EXTREME MINIMUM TEMPERATURES, 1935

Station 1.....	-7	10	13	30	38	45	66	51	40	28	25	4
Station 2.....	-6	10	14	28	38	44	58	48	34	25	22	4

EXTREME MINIMUM TEMPERATURES, 1936

Station 1.....	-6	-9	19	16	46	50	60	60	49	28	16	8
Station 2.....	-6	-9	19	14	42	46	52	51	47	23	16	8

DISTURBANCE IN THE GULF OF MEXICO, NOVEMBER 23-26, 1937

By J. H. GALLENNÉ

[Weather Bureau, Washington, December 1937]

A disturbance of considerable energy but probably not of tropical origin was in progress in the Gulf of Mexico from November 23 to 26. On the morning of November 23, moderate to fresh easterly and northeasterly winds prevailed over most of the Gulf and barometric pressure ranged from 30.50 inches along the Louisiana coast to 30.10 inches near the Yucatan Channel. At 6 p. m. (E. S. T.) of the 23d a radio report from the steamship *Tivies* at latitude 23°36' N. and longitude 86°54' W. gave a barometer reading of 30.12 inches, east-southeast winds of force 6, with cloudy weather and rough seas. From this and other ships' reports the center of the depression could be charted as near latitude 23°45' N. and longitude 89°45' W. late on the 23d.

With the disturbance centered at 7 a. m. of the 24th near latitude 25°10' N. and longitude 89°40' W., high northeast winds and fresh northeast gales with moderate to heavy rains were encountered by several ships in the north-central portion of the Gulf of Mexico. At 10 a. m. of that day the steamship *Cananova*, near latitude 19°54' N., and longitude 93°30' W., reported fresh northwest gales with very high seas.

Continuing to move in a direction slightly east of north during the next 12 hours, the depression was centered near 26°45' N. and 89°30' W. at 7 p. m. of November 24. The

barometric pressure had diminished by 7:30 p. m. of the 24th to 30.30 inches on the east Gulf coast and to about 30.00 inches at a point approximately a hundred miles south of the east coast of Louisiana. Ships' reports showed vigorous wind circulation in the northerly quadrant of the storm. The steamship *Tivies*, in latitude 28°36' N. and longitude 88°48' W., reported east-north-east winds of force 9, barometric pressure reading 30.03 inches. The steamship *Point Breeze* near latitude 27°40' N. and longitude 90°21' W. met winds of force 11 from the northeast shifting to north with heavy rain, barometric pressure 29.98. This was the highest wind of record during this disturbance.

The district forecaster at New Orleans, La., ordered northeast storm warnings at 10 p. m. of the 24th from Morgan City, La., to Carrabelle, Fla., and subsequent timely bulletins and advisories were issued from that office until the morning of November 26, when the diminishing intensity of the disturbance indicated that warnings were no longer needed.

Following the 7 p. m. observation of the 24th the disturbance moved in a northeasterly direction and was centered at 7 a. m. of November 25 near latitude 27°25' N. and longitude 88°50' W.

The lowest barometer readings of this storm (29.83

inches) were reported by the steamships *Santa Marta* and *Munplace* when both were near the center of the disturbance on the morning of the 25th. While this storm was in progress a strong anticyclone had overspread the southern and eastern portions of the United States.

During the morning of November 25 the steamship *Satoco*, when in the vicinity of 28° N. and 87° W., encountered fresh gales from the east, cloudy weather and heavy seas. The steamship *Tivives*, giving her position as north of the center of the storm, reported barometer 29.94 inches, cloudy weather and fresh northeast gales.

During the next 24 hours the disturbance moved in an east-northeasterly direction attended by moderate to fresh winds, and rising pressure. The disturbance dissipated in the northeast portion of the Gulf of Mexico, near latitude 28° N. and longitude 87° W. on the morning of November 26.

Reports at hand indicate that there was some damage to shipping in this disturbance but no loss of life.

A weak cyclonic depression moving in a southerly direction from the Plains States, reached the southwest portion of the Gulf of Mexico on November 19. There is considerable uncertainty as to its movement during the succeeding 3 or 4 days, but there are indications that it developed in the Gulf, and may be identical with the disturbance previously described.

The synoptic situation over the Gulf of Mexico on the morning of November 25 is shown in chart IX.

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By AMY D. PUTNAM

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